W9AY STUDY GUIDE · ELEMENT 7R · FREE SAMPLE

GMDSS Radio Operating

Complete question pool, organised by section, with study notes and every answer.

100	900	14	4.6 h
EXAM QUESTIONS	IN THE POOL	SECTIONS	TO READ ONCE

This is one section, free. 7RF.2, NAVTEX & MSI (Part 2 of 2): all 24 of its pool questions, each with its answer. Read the notes, then cover the answers and work through the questions, and watch how quickly the answers start to stick. The rest of the guide works the same way.

Get the full guide: w9ay.com/study/gmdss-operator. It adds all 14 sections and every one of the 900 pool questions. Pay through Stripe; your download link appears as soon as you pay and is emailed to you.

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Contents

100 questions on the exam, drawn from 900 in the pool.

SECTION	TOPIC	QUESTIONS	READING
7RF.2	NAVTEX & MSI (Part 2 of 2)	24	~8 min

Element 7RF — NAVTEX & MSI (Part 2)

Topic 45

Survival Craft Transceivers

- Survival craft transceivers may NOT communicate with: **stations ashore and public coast stations**.
- GMDSS survival craft equipment must operate on **Ch-16**.
- Required characteristics: **Ch-16, watertight, permanently-affixed antenna**.
- NOT true: "effective radiated power minimum **2.0 watts**" — it is lower (0.25W minimum).
- NOT true: "Operation on **Ch-13** is mandatory" — Ch-16 is mandatory, Ch-13 is not.
- NOT true: "Operates simplex on **Ch-70**" — Ch-70 is DSC only, not voice for survival craft.

7-45F1

With what other stations may portable survival craft transceivers NOT communicate?

- A. Communication between survival craft transceivers ashore and public coast stations.
- B. Communication between the ship and its survival craft.
- C. Communication between rescue units and survival craft.
- D. Communication between multiple survival craft and with aircraft.

Answer: A

7-45F2

Equipment for radiotelephony use in survival craft stations under GMDSS must have what capability?

- A. Operation on 457.525 MHz.
- B. Operation on Ch-16.
- C. Operation on 121.5 MHz.
- D. Operation on Ch-70.

Answer: B

7-45F3

Equipment for radiotelephony use in survival craft stations under GMDSS must have what characteristics?

- A. Permanently-affixed antenna, watertight, power 1W or 25W.
- B. Watertight, power a minimum of 1W, operation on CH-16, Ch-13 & Ch-70.
- C. Operation on Ch-16, watertight, permanently-affixed antenna.
- D. Operation on Ch-16, Ch-13 & Ch-70, power 1W, permanently-affixed antenna.

Answer: C

7-45F4

Which statement is NOT true regarding the requirements of survival craft portable two-way VHF radiotelephone equipment?

- A. Operation on Ch-16
- B. Antenna must be permanently-affixed.
- C. Simplex (single frequency) voice communications only.
- D. Effective radiated power should be a minimum of 2.0 Watts.

Answer: D

7-45F5

Which statement is NOT true regarding the requirements of VHF Survival Craft Transceivers?

- A. Operation on Ch-13 is mandatory.
- B. Effective radiated power should be a minimum of 0.25 Watts.
- C. Simplex (single frequency) voice communications only.
- D. Operation on Ch-16 is mandatory.

Answer: A

7-45F6

Which statement is NOT true regarding the requirements of survival craft portable two-way VHF radiotelephone equipment?

- A. Watertight to a depth of 1 meter for 5 minutes.
- B. Operates simplex on Ch-70 and at least one other channel.
- C. Effective radiated power should be a minimum of 0.25 Watts.
- D. The antenna is fixed and non-removable.

Answer: B

Topic 46

On-Scene Communications

- GMDSS on-scene communications: **Ch-16** (primary).
- Ch-16 is required in all portable survival craft equipment as follow-on channel.
- Full on-scene frequencies: **VHF Ch-16** and **Simplex Telex Over Radio (SITOR) (NBDP) on 2174.5 kHz**.
- NOT designated for on-scene: **SITOR (NBDP) on 2182.0 kHz** — 2182.0 is voice distress, not NBDP.
- On-scene: SITOR (NBDP) on **2174.5 kHz** (not 2182.0).
- On-scene for vessels in distress and SAR aircraft: **VHF Ch-16, 4125 kHz J3E, 3023 kHz J3E**.

7-46F1

Which of the following has been designated for “On-scene” communications in GMDSS?

- A. Ch-24
- B. Ch-2182
- C. Ch-70
- D. Ch-16

Answer: D

7-46F2

Which of the following channels is designated as the VHF follow-on communications channel and is required in all portable survival craft equipment?

- A. Ch-16
- B. Ch-6
- C. Ch-13
- D. Ch-70

Answer: A

7-46F3

Which of the following frequencies have been designated for “On-scene” communications in the Global Maritime Distress and Safety System?

- A. VHF Ch-22
- B. VHF Ch-16 and SITOR (NBDP) on 2174.5 kHz.
- C. HF radiotelephone on 21.820 MHz.
- D. SITOR (NBDP) on 2177.0 kHz and VHF Ch-16.

Answer: B

7-46F4

Which of the following frequencies has NOT been designated for GMDSS “On-scene” or SAR communications?

- A. VHF Ch-16
- B. MF radiotelephony on 2182.0 kHz
- C. SITOR (NBDP) on 2182.0 kHz
- D. HF radiotelephony on 4125.0 kHz

Answer: C

7-46F5

“On-scene" communications would best be represented by?

- A. Using Inmarsat-C "hot-key" function
- B. Sending DSC alert on VHF Ch-70
- C. SITOR (NBDP) on 2174.5 kHz
- D. SITOR (NBDP) on 4125.0 kHz

Answer: C

7-46F6

For “On-scene” communications, vessels in Distress and SAR Aircraft should use?

- A. VHF Ch-70, 4125 kHz J3E, 5680 kHz J3E
- B. VHF Ch-70, 4125 kHz J2B, 5680 kHz J3E
- C. VHF Ch-16, 4125 kHz F1B, 3023 kHz J3E
- D. VHF Ch-16, 4125 kHz J3E, 3023 kHz J3E

Answer: D

Topic 47

Distress Actions & COSPAS-SARSAT Limitations

- When embarking survival craft: **switch on EPIRB and SART immediately** and leave on.
- Vital in polar SAR: **COSPAS/SARSAT** (satellites cover poles) and **HF voice** for follow-on.
- FALSE: "EPIRB position is **always** transmitted" — older non-GPS EPIRBs rely on Doppler, not transmitted position.
- FALSE: COSPAS-SARSAT "may be used to transmit **public correspondence**" — it is distress/SAR only.
- 406 MHz EPIRB alert transmits: **unique hexadecimal ID number**.
- FALSE: "EPIRB position and Hex ID passed **instantaneously** to RCC" — there is processing delay.

7-47F1

Which action should the GMDSS radio operator take in a Distress situation when embarking in survival craft?

- A. EPIRB and SART switched on manually prior to embarking; remain aboard vessel in Distress.
- B. Notify RCC (Rescue Coordination Center) through VHF DSC in portable equipment.
- C. Switch on EPIRB and SART immediately and leave on.
- D. Communicate via Inmarsat-C from the survival craft.

Answer: C

7-47F2

Which of these would be vital to a GMDSS SAR situation in polar regions?

- A. GOES satellites to receive Distress Alerts and HF Voice for follow-on and SAR activity.
- B. GOES satellites to receive Distress Alerts and Inmarsat Voice for follow-on and SAR activity.
- C. Inmarsat satellites to receive Distress Alerts and HF Voice for follow-on and SAR activity.
- D. COSPAS/SARSAT satellites to receive Distress Alerts and HF Voice for follow-on and SAR activity.

Answer: D

7-47F3

Which statement is FALSE regarding the COSPAS-SARSAT system?

- A. The position of the EPRIB is always transmitted in the outgoing transmission (unless the unit is a GPIRB).
- B. Signals received by low altitude, near-polar orbiting satellites are relayed to a ground receiving station (LUT).
- C. Doppler shift is used to locate the position of the EPIRB.
- D. EPIRBs are satellite beacons used as alerting & homing devices.

Answer: A

7-47F4

Which statement is FALSE regarding the COSPAS-SARSAT system?

- A. EPIRBs are satellite beacons used as alerting/locating devices.
- B. May be used to transmit public correspondence.
- C. Locates Distress beacons transmitting on 406 MHz.
- D. Doppler shift is used to locate the beacons.

Answer: B

7-47F5

What information is transmitted by a 406 MHz EPIRB alert?

- A. Vessel position and nature of Distress.
- B. A unique Hexadecimal I.D. number.
- C. Vessel name and identification.
- D. Vessel MMSI number and position.

Answer: B

7-47F6

Which statement is FALSE regarding the COSPAS-SARSAT system and EPIRB operations?

- A. The EPIRB’s position is calculated by the satellite or LUT and later passed to the MCC.
- B. The EPIRB transmits a unique Hex I.D. and vessel position that may be passed to the RCC.
- C. The EPIRB’s position and Hex I.D. is passed instantaneously to the RCC.
- D. The EPIRB transmits a unique Hex I.D. that is passed to the RCC if it cannot be determined by the MCC to be inadvertent.

Answer: C

Topic 48

Pre-Distress Preparation & Inmarsat Distress

- Prior to distress: **all listed good practices should be done** — "all of these answers" is correct.
- Detailed distress message content: **vessel name/call sign, POB, all means of communication**.
- Best for simultaneous long-range + on-scene: **MF-HF SSB transmitters** on voice follow-on frequencies.
- NOT true about Inmarsat distress: "USCG coast stations receive alert and immediately notify RCC" — the Land Earth Station (LES) routes it.
- Best resources for planning: **ALRS Volume 5, NGA Pub 117, ITU List of Coast Stations**.
- Inmarsat hot-key alerts: the **LES programmed in the Distress Alert Update menu** determines which Rescue Coordination Center (RCC) receives the alert. The Network Coordination Station (NCS) routes if LES is unavailable.

7-48F1

What actions should the GMDSS radio operator take prior to any potential Distress situation?

- A. Create a table or chart of all the DSC coast stations that might be used during the vessel's itinerary.
- B. All of these answers are good operational practice and should be consistently done.
- C. Prepare a detailed Distress message file on both satellite & MF-HF SITOR (NBDP) equipment containing all information needed in a Distress so it will be available for last-minute editing.
- D. Ensure all LES choices are correct and then updated properly as the vessel transits different SAR jurisdictions.

Answer: B

7-48F2

What information should be contained in a detailed Distress message that was not transmitted by an initial Distress “hot-key” alert?

- A. Vessel position, course & speed and the nature of Distress.
- B. The distress vessel’s IMN and position at the time of alert.
- C. Vessel name & call sign, POB and all potential means to communicate with the vessel.
- D. Vessel name & call sign, distress vessel’s IMN & vessel position.

Answer: C

7-48F3

Which GMDSS equipment is best suited to simultaneous long-range communications with an RCC/coast station and OSC vessels or SAR aircraft?

- A. MF-HF SITOR (NBDP) transmitters using telex follow on frequencies.
- B. Inmarsat Signals routed via the RCC to the SAR vessels & aircraft under their control.
- C. VHF transmitters to reach SAR aircraft and OSC vessels as well as the RCC/coast station.
- D. MF-HF SSB transmitters using voice follow-on frequencies.

Answer: D

7-48F4

Which statement is NOT true regarding an Inmarsat Distress Alert?

- A. USCG coast stations will receive the alert and immediately notify the correct RCC.
- B. The operator selection of LES will determine which associated RCC will receive the alert.
- C. If the operator selects an invalid or inoperative LES code the NCS for that service will intercept the call and reroute the alert.
- D. If the LES choice is not updated properly the Distress Alert might be routed to a non-optimum RCC, introducing delays and confusion into the Distress situation.

Answer: A

7-48F5

What are the best resources for researching and planning equipment setups and updates prior to any potential Distress situation?

- A. NGA Pub. 117, ALRS Volume 5 or manufacturer’s equipment manuals.
- B. ALRS Volume 5, FCC Part 80 or ITU List of Coast stations.
- C. ITU List of Coast stations, IMO GMDSS handbook, FCC Part 80.
- D. ALRS Volume 5, NGA Pub, 117 or ITU List of Coast stations.

Answer: D

7-48F6

Which statement is true regarding Inmarsat “hot-key” Distress Alerts?

- A. The LES programmed by the watch officers into the Distress Alert Update menu determines which RCC will receive your initial Distress Alert.
- B. The vessel’s position is checked against the SAR jurisdictions and the proper LES updated as the vessel changes NAVAREAS.
- C. The GPS position updates the Distress Alert Update menu to the correct LES choice to ensure proper communications with an RCC.
- D. The Distress Alert defaults are set correctly by the manufacturer and then automatically updated.

Answer: A

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